

REMARKS

Claims 6, 7, 12, and 13 remain in the application.

Claims 6, 7, 12, and 13 have been amended to include "said visible light-reflecting coating being a dichroic or metallic coating applied on the outer surface of said lamp vessel". The amendment does not introduce any new matter into the specification because it incorporates limitations previously presented in cancelled claims 2 and 3.

Claims 6 and 12 have also been amended to state that "at least one incandescent filament [is] ~~(3; 3')~~ arranged sealed within the lamp vessel". The amendment does not introduce any new matter into the specification and is supported by Figs. 1 and 2 of the present application.

No claims have been indicated to be allowable.

Reply to the Prior Art Rejections

The Office Action rejects claims 6, 7, and 13 under 35 U.S.C. § 103(a) as being unpatentable over LaGiusa (US Patent No. 4,041,344) in view of Bunk *et al* (US Patent No. 5,811,934) and Tschetter (US Patent No. 4,535,269).

The Office Action also rejects claim 12 under 35 U.S.C. § 103(a) as being unpatentable over DeCaro (US Patent No. 3,983,513) in view of Bunk and Tschetter.

Claims 6, 7, and 13

Although Applicant recognizes that an obviousness inquiry is an expansive and flexible one, the Office Action must nevertheless demonstrate a prima facie case of obviousness to reject Applicant's claims for obviousness under 35 U.S.C. § 103(a). "To support the conclusion that the claimed invention is directed to obvious subject matter, either the

references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” MPEP § 706.02(j) (citing *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)).

The present Office Action fails to establish a prima facie case of obviousness because LaGiusa does not disclose or suggest the claim elements of currently amended claim 6 that the present Office Action relies on LaGiusa as disclosing.

LaGiusa discloses a lamp comprising a reflecting coating applied to an outer bulb, wherein a light source for the outer bulb may comprise a halogen cycle inner lamp:

...the frosting and silvering [reflective coating] may each be accomplished on either the inside or outside surface of the bulb. While a frosted face is preferred, a clear face may be used when low face luminance is a paramount consideration. The light source may comprise a filament, *a halogen cycle inner lamp* or a high intensity gaseous discharge lamp.

LaGiusa at column 5, lines 20-26 (emphasis added by the Applicants).

Currently amended claim 6, in contrast, claims a halogen incandescent lamp with at least one incandescent filament sealed within a lamp vessel, wherein a section of the lamp vessel is in the form of a reflector via a visible light-reflecting coating. Thus, LaGiusa fails to disclose or suggest applying a visible light-reflecting coating to a lamp vessel of a halogen incandescent lamp as required by currently amended claim 6 because LaGiusa teaches applying a light-reflecting coating applied only to an outer bulb that has a halogen cycle inner lamp light source.

To explain further, the difference between an outer bulb and a lamp vessel is recognized in the art. For example, US Patent Publication No. 2008/0278050 (Michiels) is directed to an electric lamp and method for mounting a lamp vessel in an outer bulb. Fig. 1 of Michiels shows a lamp vessel 3 surrounded by an outer bulb 1. *See also Michiels* at

paragraphs 13-14; *US Patent No. 4,307,315* at Fig. 8 and column 4, lines 4-10; *US Patent No. 5,523,650* at column 1, lines 6-10. Thus, a lamp vessel is recognized in the art as a casing that seals a filament within it and not an outer bulb that encloses a lamp vessel.

It is clear, then, that LaGiusa discloses an outer bulb that encloses a halogen cycle inner lamp, i.e., a lamp vessel. Further, LaGiusa discloses applying a light-reflecting coating applied only to the outer bulb that encloses the halogen cycle inner lamp. Thus, LaGiusa fails to disclose or suggest applying a visible light-reflecting coating to *a lamp vessel* of a halogen incandescent lamp as required by currently amended claim 6.

Because LaGiusa fails to disclose or suggest applying a visible light-reflecting coating to a lamp vessel as required by currently amended claim 6, and Bunk and Tschetter fail to cure this defect, the combination of LaGiusa, Bunk, and Tschetter fails to establish a prima facie case of obviousness, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

In view of the foregoing, reconsideration and allowance of claims 6, 7, and 13 are solicited.

Claim 12

The Office Action also rejects claim 12 under 35 U.S.C. § 103(a) as being unpatentable over DeCaro in view of Bunk and Tschetter. Specifically, the Office Action takes the position that there is a teaching, suggestion, or motivation that would have led one of ordinary skill to modify DeCaro according to the teachings of Bunk and Tschetter to arrive at the halogen incandescent lamp of claim 12.

To reject a claim based on this rationale, an Office Action must articulate a finding that there is some teaching, suggestion, or motivation (TSM), either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *MPEP § 2143(G)*. Although the

Courts have made clear that the TSM test is flexible and an explicit suggestion to combine the prior art is not necessary, the Office Action must nevertheless support an articulated finding of a TSM to modify a reference with some rational underpinning in order to establish a prima facie case of obviousness. *See Id* (citing *KSR Int'l. v. Teleflex Inc.*, 550 U.S. 398 (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006))).

The Office Action fails to establish a prima facie case of obviousness because the Office Action's articulated reasoning for modifying DeCaro according to the teachings of Bunk and Tschetter lack rational underpinnings for the reasons given below.

A. The Office Action fails to provide an articulated finding with some rational underpinning of a TSM to modify DeCaro in light of Bunk because the articulated finding is conclusory.

According to the present Office Action, at page 5, "Bunk teaches a halogen incandescent filament being less than or equal to 4.4 mm, and its external diameter being less than 2.3 mm in order to achieve a compact filament." The present Office Action then asserts on page 5 that "it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the dimension of the filament, as disclosed by Bunk, in the lamp of DeCaro in order to achieve a compact filament." (citations omitted by the Applicants).

The Office Action asserts, then, that one of ordinary skill in the art would decrease the filament size of DeCaro per the teachings of Bunk in order to achieve a smaller filament size, i.e., a compact filament. Such reasoning is conclusory and does not provide a rational underpinning as to why one in the art would find a TSM to decrease the size of DeCaro. That is, modifying a feature of a primary reference to mirror a feature in a secondary reference will always result in the primary reference "achieving" that feature, but such a rationale cannot establish a prima facie case of obviousness.

Applicants respectfully request an articulated finding with some rational underpinning as to why it would have been obvious to one of ordinary skill in the art to modify the dimension of the filament in the lamp of DeCaro per the teachings of Bunk.

B. The Office Action fails to provide an articulated finding with some rational underpinning of a TSM to modify DeCaro in light of Tschetter because the articulated finding is an incorrect interpretation of the technology of Tschetter.

According to the present Office Action, at page 6, the "Tschetter reference teaches an incandescent lamp wherein the envelope has ellipsoidal shape whose major axes [sic] is 17.6 mm and minor axes [sic] is 14.5 mm in order to achieve improved efficiency. The present Office Action then asserts on page 6 that "it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the dimension of the lamp, as disclosed by Tschetter, in the lamp of the previous combination [(the lamp of DeCaro modified per the teachings of Bunk)] in order to achieve improved efficiency. (citations omitted by the Applicants).

Applicants submit that asserting that merely modifying the dimensions of a lamp to achieve improved efficiency is disingenuous and incorrect. Tschetter never states that the specific axis dimensions alone achieve improved efficiency, but rather a lamp "having the desired features of this invention" achieve improved efficiency:

In accordance with the practice of this invention, improved incandescent lamps were fabricated. The lamps that were made *had twelve layer IR films* on the inner envelope 28. The film 30 consisted of twelve (12) alternating layers of materials whose indices of refraction were 2.0 and 1.45. The inner envelopes 28 had *ellipsoidal shapes* whose major axis was 17.6 mm long and whose minor axis was 14.5 mm long. The filaments 32 in these lamps were only 5 mm long, rather than the desired 10 mm long determined by the desired foci separation of the inner fabricated envelopes 28. A comparison of the performance of lamps *having the desired features of this invention* against similar lamps not having the advantages of the present was accomplished. The efficacy gain achieved with the lamp of the present invention was 15%.

Tschetter at column 7, lines 45-60 (emphasis added by the Applicants).

Thus improved efficiency is achieved by the combination of shaping an inner envelope of a lamp to an ellipsoidal shape with a major axis of 17.6 mm long and minor axis of 14.5 mm long and applying IR films to the inner envelope of ellipsoidal shape. That is, the Office Action is incorrect in asserting a lamp with a major axis of 17.6 mm long and minor axis of 14.5 mm long, alone, achieves improved efficiency. Thus, the Office Action fails to establish a prima facie case of obviousness because the Office Action's articulated reasoning for modifying DeCaro according to the teachings of Tschetter lacks a rational underpinning.

C. There is not a TSM to modify DeCaro per the teachings of Tschetter because DeCaro would be rendered unsatisfactory for its intended purpose.

As explained above, Tschetter teaches shaping an inner envelope of a lamp to an ellipsoidal shape, wherein IR films are applied to the inner envelope. The Abstract of Tschetter further explains:

A general service incandescent lamp having a tungsten filament, an improved inner shaped bulb and a temperature resistant infrared reflective film on the outer surface of the inner bulb is disclosed. The inner bulb has an ellipsoidal shape which cooperates with the tungsten filament and infrared film to provide a highly efficient incandescent lamp.

The use of an inner bulb, which necessitates using an outer bulb, renders DeCaro unsatisfactory for its intended purpose of providing a halogen lamp without an outer bulb:

It would thus be very desirable and advantageous to provide a reflector type incandescent lamp that could utilize the regenerative principle provided by a halogen atmosphere and which would also concentrate the light rays into a concentrated beam in a more efficient manner *without the use of a separate outer envelope or bulb*.

DeCaro at column 1, lines 52-58 (emphasis added by the Applicants).

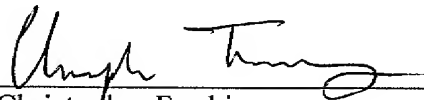
"If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *MPEP2143.01(V)(citing In re Gordon, 733 F.2d 900, 221*

USPQ 1125 (Fed. Cir. 1984)). Because modifying DeCaro per the teachings of Tschetter in order to achieve improved efficiency would render DeCaro unsatisfactory for its intended purpose of providing a reflector type incandescent lamp without the use of a separate outer envelope or bulb, there is no suggestion or motivation to make the proposed modification

In view of the foregoing, reconsideration and allowance of claim 12 is solicited. Since it is believed that all pending claims are allowable over the cited art, Applicants respectfully request that the rejections be withdrawn, and that all pending claims be allowed.

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Respectfully Submitted,

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